Understanding the Workforce Safety & Insurance **Experience Modification Factor**

Defining the Mod

Workforce Safety & Insurance's experience rating formula is an actuarially based method of determining if a specific risk's loss experience is better than expected or worse than expected. Similar to formulas used in nearly all other states, WSI's formula compares the losses that actually occurred to the losses that were expected. The period used for comparison is referred to as the experience rating period – it consists of five policy periods excluding the most recently completed period. A unity mod (1.00) indicates an average risk. A mod greater than 1.00 indicates a risk with greater than expected loss experience. A mod less than 1.00 indicates a risk with better than expected loss experience. Experience rate mods can be translated to surcharges or discounts. Mods of 1.00 or greater reflect a premium surcharge; mods less than 1.00 reflect discounts to premium (e.g. .97 = 3% discount or -3%).

Understanding the Formula

Most insurance and risk management professionals have little interest in working through the many formulas associated with the actuarial side of the industry. However, a quick discussion of the mod formula will help lay the foundation for understanding what drives the mod up or down. The mod formula is outlined below:

The Mod Formula

$$\frac{\text{Actual Primary Losses} + \text{Credibility Factor} \times \text{Actual Excess Losses} + (1 - \text{Credibility Factor}) \times \text{Expected Excess Losses} + \text{Ballast Value}}{\text{Total Expected Losses} + \text{Ballast Value}}$$

Primary losses are the first $10,000 of any loss. Excess losses are all loss amounts over $10,000 - capped at $250,000 per claim. Expected losses are computed using an industry average loss rate and the amount of payroll by payroll class code. The total amount of primary losses is a measure of frequency. Excess losses are a measure of loss severity. Because frequency represents greater risk than severity, the primary losses are not weighted and impact the mod much more significantly than excess losses.

The formula attempts to accommodate for the size of the risk (thus the credibility of its loss experience) by utilizing a credibility value in the formula. The credibility factor is multiplied by the actual excess losses of the risk. The complement of the credibility value (1 - credibility factor) is multiplied by expected excess losses. The credibility value increases as the expected losses for a risk increase. Therefore, the larger the risk, the more weight is placed on the actual excess loss experience. It is interesting to note that no credibility value is applied to the primary losses. Therefore, primary losses have a more significant impact on the mod than excess losses.

NOTE: The ballast value is used in the numerator and denominator to move all mod calculations closer to unity (1.0).

So How Can I Use This?

An understanding of the mod formula lets you focus efforts on preventative measures that will decrease the mod. There are two basic sensitivity analyses which should be studied by everyone who has a mod. These are discussed below.

The minimum mod and controllable mod: What would my mod be if I had incurred no losses? For example, if my mod is 1.25 and my minimum mod (assuming no losses) is .65, then my controllable mod is .60. If my unmodified premium is $100,000, then my mod adjusted premium is $125,000. Many companies make the mistake of thinking that their loss experience has increased their premium by $25,000. However, considering the minimum mod of .65 and the controllable mod of .60, the loss experience has actually resulted in a premium increase from $65,000 to $125,000 – an increase of $60,000! The actual difference can be a powerful motivator for loss control or loss prevention services.

The cost of each loss: The impact that each loss has on the mod is another important analysis. This can be determined by simply removing the loss from the mod calculation and recomputing the mod. It is important to note that the loss will be in the experience rating period for five years. Therefore, the one-year mod impact can be multiplied by the unmodified premium and then multiplied by five. This gives an estimate of the total cost of the loss in terms of the increased premium dollars paid.

Did You Know…

- The date of injury on a claim is used to determine its inclusion in an experience rating period.
- Ten $10,000 losses will increase your mod much more than one $100,000 loss.
- A $250,000 loss and a $1,000,000 loss have the same impact on your mod.

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